

1 WE CLAIM:

2

3 1. A formulation for preparing high resilience foam
4 comprising, based on total amount of polyol:

5 (i) 100 parts by weight of a polyol formulation
6 comprising:

7 (a) a polymer-modified polyol formed by
8 polymerizing an olamine with an organic polyisocyanate in
9 the presence of a polyol,

10 (b) a polymer-modified polyol formed by
11 polymerizing one or more ethylenically unsaturated
12 monomers in the presence of a polyol, and

13 (c) optionally further polyol
14 wherein the polyol present in polymer-modified polyol (a)
15 and polymer-modified polyol (b) is prepared from hydroxyl
16 containing starting compounds and is not an amine-based
17 polyol;

18 (ii) 0.1 to 6 parts by weight of blowing
19 agent;

20 (iii) 0 to 5 parts by weight of crosslinking
21 agent(s);

22 (iv) 0.01 to 2.5 parts by weight of
23 polyurethane catalyst(s); and optionally

24 (v) further usual auxiliaries.

1 2. The formulation of claim 1, wherein the polymer
2 formed by polymerizing an olamine with an organic
3 polyisocyanate and the polymer formed by polymerizing one
4 or more ethylenically unsaturated monomers are present in
5 a weight ratio in the range of from 1 : 10 to 10 : 1.

1 3. The formulation of claim 1, wherein the
2 formulation comprises of from 1 %wt to 15 %wt of polymer
3 formed by polymerizing an olamine with an organic
4 polyisocyanate and of from 1 %wt to 15 %wt of polymer

5 formed by polymerizing one or more ethylenically
6 unsaturated monomers.

1 4. The formulation of claim 3, which formulation
2 comprises in total of from 1 %wt to 25 %wt of solid
3 polymer particles.

1 5. The formulation of claim 1, in which the polymer
2 present in the polyol formed by polymerizing an olamine
3 with an organic polyisocyanate in the presence of a
4 polyol is formed by polymerizing styrene optionally in
5 combination with acrylonitrile.

1 6. The formulation of claim 1, wherein the polymer-
2 modified polyol containing polymer polyol formed by
3 polymerizing an olamine with an organic polyisocyanate
4 comprises from 5 wt% to 50 wt% of polymer in polyol.

1 7. The formulation of claim 1, wherein the polymer-
2 modified polyol formed by polymerizing an olamine with an
3 organic polyisocyanate in the presence of a polyol, and
4 the polymer-modified polyol formed by polymerizing one or
5 more ethylenically unsaturated monomers in the presence
6 of a polyol comprise polyalkoxylated polyols.

1 8. A process for preparing a high resilience
2 polyurethane foam comprising:

3 mixing a formulation comprising:

4 (i) 100 parts by weight of a polyol formulation
5 comprising:

6 (a) a polymer-modified polyol formed by
7 polymerizing an olamine with an organic
8 polyisocyanate in the presence of a
9 polyol,

10 (b) a polymer-modified polyol formed by
11 polymerizing one or more ethylenically
12 unsaturated monomers in the presence of a
13 polyol, and

14 (c) optionally further polyol

15 wherein the polyol present in polymer-modified polyol (a)
16 and polymer-modified polyol (b) is prepared from hydroxyl
17 containing starting compounds and is not an amine-based
18 polyol;

19 (ii) 0.1 to 6 parts by weight of blowing agent;

20 (iii) 0 to 5 parts by weight of crosslinking
21 agent(s);

22 (iv) 0.01 to 2.5 parts by weight of polyurethane
23 catalyst(s); and optionally

24 (v) further usual auxiliaries

25 with an isocyanate at an isocyanate index of from 80
26 to 130.

1 9. The process of claim 8 wherein the blowing agent
2 comprises water.

1 10. The process of claim 8 wherein the crosslinking
2 agents comprise polyfunctional alkanol amines.

1 11. The process of claim 8 wherein the polyurethane
2 catalysts comprises a tertiary amine catalyst.

1 12. The process of claim 8 wherein the usual
2 auxiliaries comprise fillers, flame retardants, foam
3 stabilizers and colorants.

1 13. The process of claim 8 wherein the isocyanate
2 index is between 100 to 120.

1 14. The process of claim 8 wherein the isocyanate
2 comprises a polyisocyanate.